NG-102

November-2018

B.C.A., Sem.-V

SEC-301(1) : Software Project Management

Time : 2:30 Hours]   **[Max. Marks : 70**

1. (A) Answer the following :

      (1) Explain activities covered by Software Project Management along with SDLC.   **7**

      (2) What is stakeholder ? List and explain types of stakeholders.   **7**

<div align="center">OR</div>

      (1) Explain Step-1 (Identify Project scope and objectives) of project planning in detail.   **7**

      (2) Write a note on Cost-Benefit analysis and Cash flow forecasting.   **7**

  (B) Attempt any **four** :   **4**

      (1) _____ is a planned activity.

          (a) Project   (c) Software

          (b) Program   (d) None of these

      (2) SDLC stands for _____.

          (a) Software Development Life Cycle

          (b) Structure Development Life Cycle

          (c) Software Design Life Cycle

          (d) Structure Design Life Cycle

      (3) Forecast of inflation rates tends to be _____.

          (a) Certain   (c) (a) and (b)

          (b) Uncertain   (d) None of above

      (4) _____ cost includes staff costs.

          (a) Setup cost   (c) Operational cost

          (b) Development cost   (d) Common cost

(5)   Some products are handed over to the clients at the end of project are called
      _____.

      (a)   Product   (c)   Deliverables

      (b)   Program   (d)   All of above

(6)   PFD stands for _____.

      (a)   Project Flow Diagram   (c)   Product Flow Diagram

      (b)   Program Flow Diagram   (d)   Project Flow Design

2.   (A)   Answer the following.

      (1)   List and explain eight core Atern principles.   **7**

      (2)   Explain various software effort estimation techniques.   **7**

                                    OR

      (1)   Write a brief note on Waterfall model.   **7**

      (2)   What is "Estimating by Analogy" ? Find Euclidean Distance for the
            following :   **7**

Module	Input	Output
A	9	15
B	10	14

            New module C requires 8 inputs and 12 outputs. Which of module A or B is
            the closest analogy in terms of Euclidean Distance ?

     (B)   Attempt any **four** :   **4**

      (1)   Waterfall model can be expanded into _____.

            (a)   W-Process model   (c)   Incremental model

            (b)   Spiral model   (d)   V-Process model

      (2)   Each loop of spiral is called _____.

            (a)   Stage   (c)   Phase

            (b)   Circle   (d)   loop

      (3)   Later increments might require modifications to earlier increment. This is
            called _____.

            (a)   Software Breakage   (c)   Time-Boxing

            (b)   Gold Plating   (d)   None of these

      (4)   DSDM stands for _____.

            (a)   Dynamic System Development Method

            (b)   Design System Development Method

            (c)   Dynamic Structure Development Method

            (d)   None of these

(5) Effort = ___*_____

    (a) Productivity, constant

    (b) System size, Productivity Rate

    (c) Size, constant

    (d) Constant, effort

(6) KLOC stands for _____

    (a) Kilo Lines of Code   (c) Knowledge Length of Code

    (b) Thousand Lines of Code   (d) None of these

3. (A) Answer the following : **7**

(1) Construct a network diagram for following. Find critical path and total project duration.

Activity	Preceding Activity	Duration(Week)
A	–	10
B	–	14
C	A	8
D	A	7
E	B	5
F	B	10
G	C	9
H	D, E	11
1	G, H	5

(2) Explain risk planning in detail. **7**

OR

(1) Describe the rules for formulating a network diagram. **7**

(2) What is risk ? Describe categories of risk. **7**

(B) Attempt any **three** : **3**

(1) In a network diagram, time moves from _____.

    (a) Right to Left   (c) Top to Bottom

    (b) Left to Right   (d) Bottom to Top

(2) PERT stands for _____.

    (a) Programme Evaluation & Review Technique

    (b) Project Evaluation & Review Technique

    (c) Programme Examination & Review Technique

    (d) Project Examination & Review Technique

(3) The difference between total float and free float is called _____.

   (a) Float   (c) Interfering Float

   (b) Free Float   (d) None of above

(4) An uncertain event or condition that has positive or negative effect on a project is called _____.

   (a) Cause   (c) Effort

   (b) Effect   (d) Risk

(5) Risk Exposure =____ * ___

   (a) EV, AC

   (b) Size, Effort

   (c) Cause, Effect

   (d) Potential damage, Probability of occurrence

4. (A) Answer the following :

   (1) Explain nature of resources.   **7**

   (2) What is earned value analysis ? List and explain methods of it.   **7**

OR

   (1) Write a note on Fixed Price Contract in detail.   **7**

   (2) List methods of Visualizing Progress. Explain any two in detail.   **7**

(B) Attempt any **three** :   **3**

   (1) _____ is a secondary resource.

     (a) Money   (c) Space

     (b) Time   (d) Labour

   (2) A very jagged slip lines indicates need for _____

     (a) Today cursor   (c) Implementation

     (b) Rescheduling   (d) None of these

   (3) SPI = _____.

     (a) EV-AC   (c) EV/PV

     (b) EV/AC   (d) EV-PV

   (4) _____ system is created for specifically one customer.

     (a) Off-the-shelf   (c) Bespoke

     (b) COTS   (d) None of these

   (5) The total service time divide by the number of failure is called _____.

     (a) Availability   (c) Failure on demand

     (b) Support Activity   (d) Mean time between failures

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NG-102

November-2018

B.C.A., Sem.-V

SEC-301(2) : Advanced Java

Time : 2:30 Hours]   **[Max. Marks : 70**

1. (A) Answer the following :

      (1) Write use of File class and explain File class with its constructors and methods.   **7**

      (2) How objects can be written in file ? Explain.   **7**

<div align="center">OR</div>

      (1) Which class is used to read records randomly from the file ? Explain with its methods.   **7**

      (2) Explain FileOutputStream class in depth.   **7**

  (B) Answer the following : (Any **four**)   **4**

      (1) Random access file are also known as _____ .

          (a) Data access file   (b) Instance access file

          (c) Both of the above   (d) None of the above

      (2) Serialization means _____ .

          (a) Object to byte stream conversion

          (b) Byte to object stream conversion

          (c) Both of the above

          (d) None of the above

      (3) A memory location that is used to temporarily hold data is a _____ .

          (a) Stream   (b) Buffer

          (c) Bulkwark   (d) Channel

      (4) The _____ package contains all the classes you use in file processing.

          (a) Java.file   (b) Java.io

          (c) Java.lang   (d) Java.net

      (5) A _____ is collection of fields that contain data about an entity.

          (a) Record   (b) Data

          (c) File   (d) None of the above

      (6) FileInputStream class is provide capability to _____ disk file.

          (a) Read   (b) Write

          (c) Read and write   (d) Delete

2. (A) Answer the following :

    (1) What is container ? Write name of different containers. Explain any two containers in depth. **7**

    (2) Explain JLabel and JCheckBox in depth. **7**

    OR

    (1) Write difference between JFrame and JApplet. How can we add and remove components in JApplet ? Explain any two additional applet methods. **7**

    (2) Explain JButton and JCombobox. **7**

    (B) Answer the following : (Any **four**) **4**

    (1) AJPanel is a _____.

        (a) Component that holds other components

        (b) Swing component

        (c) Container

        (d) All of the above

    (2) The container class derived from _____.

        (a) Component   (b) Windows

        (c) Panel   (d) None of the above

    (3) _____ method use to set number of columns in JTextField.

        (a) setColumns()   (b) setLines()

        (c) Any of the above   (d) None of the above

    (4) JScrollPane jp =new JScrollPane();

        In ap scroll bars appear_____.

        (a) Horizontally

        (b) Both horizontally and vertically

        (c) Only if needed to display the contents

        (d) Always

    (5) _____ method returns current state of JCheckBox.

        (a) isSelected()   (b) isStatus()

        (c) Any of the above   (d) None of the above

    (6) A class that respond to button clicks must implement a(n) _____

        (a) ButtonListener   (b) ItemListener

        (c) ClickListener   (d) ActionListener

3. (A) Answer the following :

(1) What is use of Layout Manager ? Explain GridLayout in depth. **7**

(2) Differentiate TCP and UDP protocols and explain ServerSocket class in depth. **7**

<div align="center">OR</div>

(1) Write overview of java.net package and explain InetAddress class in depth. **7**

(2) Explain event driven programming and define terms : Event, Listeners and Handlers. **7**

(B) Answer the following : (Any **three**) **3**

(1) Handlers are_____.

    (a) Methods   (b) Classes

    (c) Interface   (d) None of the above

(2) Button click generates _____ event.

    (a) Click   (b) Action

    (c) Any of the above   (d) None of the above

(3) _____ layout is used to arrange the components in stack.

    (a) Flow   (b) Border

    (c) Grid   (d) Card

(4) _____ package is used in networking applications.

    (a) Java.net   (b) Java.networking

    (c) Java.socket   (d) None of the above

(5) _____ class is used to access the resources on the internet using web.

    (a) URL   (b) URLServer

    (c) Socket   (d) DatagramSocket

4. (A) Answer the following :

(1) Write steps for JDBC connection. **7**

(2) Explain getConnection and createStatement methods with their use and prototype. **7**

<div align="center">OR</div>

(1) Write different types of drivers for JDBC. Explain any two in depth. **7**

(2) Write Java steps to insert data into Employee (id, name) table. **7**

(B) Answer the following : (Any **three**)   3

    (1) For loading the JDBC-ODBC driver _____ method is used.

        (a) forName()   (b) loadDriver()

        (c) getConnection()   (d) None of the above

    (2) _____ method creates the Statement object for sending query to the database.

        (a) createStatement()   (b) sendQuery()

        (c) execute()   (d) None of the above

    (3) For getting a database result, the _____ object is required.

        (a) Statement   (b) ResultSet

        (c) Connection   (d) Query

    (4) The _____ package is used for data Java Database Connectivity.

        (a) Java.database   (b) Java.db

        (c) Java.sql   (d) Java.io

    (5) ODBC stands for_____.

        (a) Open database connection   (b) Object database connection

        (c) Object data connection   (d) Open database connectivity

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